AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

ARCTIC TRAIL: SIX STEPS THE UNITED STATES MUST TAKE TO MANAGE THE GLOBAL RUSH NORTH

by

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Abstract

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- 1) Ratify the 1982 UN Convention on the Law of the Sea;
- 2) Find ways to empower the Arctic Council, the most successful multilateral organization in the region;
- 3) Submit unresolved diplomatic disputes to the International Seabed Authority as a neutral third party arbitrator;
- 4) Mobilize the American public to understand the implications of being an "Arctic Nation";
- 5) Reorganize the Department of Defense's Unified Command Plan; and
- 6) Invest in a cohesive and robust Arctic presence to ensure U.S. Arctic sovereignty.

Preface

As a recent exchange officer in the Canadian Forces, I learned many of the issues involved in Canadian/U.S. relations get little public attention in the United States. Chief among these issues was the dispute over the Northwest Passage. Often, Canadians would express hostility toward the U.S. position-that the Northwest Passage is an international strait. While the Canadians' case seemed logical, I was unaware of why the United States took the position that it did. Consequently, I took advantage of this opportunity at Air Command and Staff College to research the United States' position. In the course of researching this topic, my eyes have been opened to the effects of global warming. Global warming should no longer be relegated to conversations over drinks. Significant geopolitical changes are occurring, right now, due to its effects. The challenges in the Arctic will be the first major hurdle. While I am sure efforts to stop warming the planet will continue, we also must place a significant emphasis on managing the consequences. We cannot afford to let the Arctic lead us to war—especially one for which we are unprepared.

Introduction

The geographic landscape in the Arctic is rapidly changing, which could allow substantial transportation and resource development in the future. Currently, the international legal framework is not sufficient to handle the sovereignty and resource rights disputes in the region. Increased human activity in the region, however, will exacerbate these disputes, creating significant national security, economic and environmental implications. Arctic development is at a crossroads in which either competition or cooperation can dictate the region's future. Woefully behind the other Arctic nations in both capabilities and regional development, the United States must actively engage the Arctic. Using a six-step process, the United States should take a leadership role in multilateral efforts to resolve regional disputes, develop enforceable environmental standards and enhance scientific exploration in the region.

The Arctic is Melting

The Arctic landscape is changing at an extraordinary pace. According to the 2004 Arctic Climate Impact Assessment (ACIA), the average extent of Arctic sea-ice cover in the summer declined 15-20% over the previous 30 years. ¹ Moreover, local sea level rise within the region increased 10-20 cm within the last 100 years. ² In fact, the National Snow and Ice Data Center, which monitors the Arctic region daily, just declared that the 2008 ice melt season set a new record for total ice lost. ³ There is no indication that these dramatic changes will stop.

Based on even the most conservative regional warming estimates, scientists predict the Arctic landscape will see dramatic changes throughout the next century. ⁴ Using the lowest emissions scenarios considered by the Intergovernmental Panel on Climate Change (IPCC), the Arctic is expected to warm 4-7°C over land and 7-10°C over the ocean throughout the next

century. ⁵ This will result in longer melt seasons and increasingly navigable waters. Figure 1 in the Appendix shows the reduction in sea-ice cover expected throughout the century.

According to the Office of Naval Research, Naval Ice Center, "Seasonal sea lanes through the formerly ice-locked Arctic may appear as soon as 2015. If this trend continues, experts postulate summertime disappearance of the ice cap could be possible by 2050." Some of this warming is irreversible. The greenhouse gasses already emitted have atmospheric lifetimes that can span centuries. Even if all emissions were cut today, planetary warming of approximately 0.5°C would continue throughout this century. Not only is the Arctic becoming more accessible, it is becoming more desirable.

Benefits and Challenges of a Melting Arctic

With an unyielding growth in global energy demand, the region's vast fossil fuels are highly sought after. In May 2008, the U.S. Geological Survey estimated the Arctic Circle contains 90 billion barrels of undiscovered oil, 1,699 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids. ⁸ The untapped oil alone equates to approximately 1/3 of the total proven oil reserves in Saudi Arabia. ⁹ While energy resources may be the main driver in the global rush north, the region provides many other incentives as well.

It is speculated that the Arctic region also is rich in other natural resources. In the Canadian Arctic alone, it is estimated that there are potentially trillions of dollars in raw materials such as gold, silver, zinc, iron, and diamonds. Moreover, some fish species-such as the juvenile sockeye salmon-are migrating north due to warmer ocean temperatures. In addition to the economic draw to the region, there is increasing interest in its natural beauty.

Arctic tourist demand is surging and forecasted to get stronger as the region becomes more accessible. Within the last two decades, there has been dramatic growth in Arctic

tourism.¹² According to prominent researchers at the University of Calgary, "It appears that geographic isolation and a challenging climate, which once precluded tourist visits, are now the very factors attracting them."¹³ In fact, this past summer set a 26-ship record for the most cruise ships to ever sail around the Canadian Arctic in a given year.¹⁴ Moreover, the industry has moved beyond its infancy stage by increasing the number of ships and routes in the region, as well as establishing more predictable patterns of activity.¹⁵ Cruise ships and oil tankers are not the only form of shipping expected to grow in the region.

A navigable Arctic can expect to see a tremendous growth in commercial shipping, as well. With the opportunity for reduced transportation distances and alternative routing around current strategic nodes, nations could increasingly ship their goods in the region. Figure 2 in the Appendix shows the location of the Northwest Passage and the Northern Sea Route (NSR), the two most viable shipping lanes in the Arctic. By using these routes, it is estimated that transit lengths for commercial ships could be reduced by approximately 40% from the current midlatitude routing. For example, table 1 depicts the approximate transit lengths for a typical shipment from Hamburg to Yokohama.

Table 1. Shipping distances from Hamburg to Yokohama¹⁷

Route	Approximate Distance (nm)
Northern Sea Route	6,920
Suez Canal	11,073
Panama Canal	12,420
Cape of Good Hope	14,542

Not only does the Arctic offer reduced transit distances, it also offers transportation network diversity. As the global situation continues to change, nations may want to reduce their dependence on critical energy shipment nodes. For example, China actively has sought to reduce its dependence on the Strait of Malacca. Moreover, the threat of an Iranian closure to the Strait

of Hormuz would seem less intimidating if a substantial portion of the world's energy resources were supplied and transported through the Arctic. While resource exploitation, tourism and commercial shipping are significant advantages of a navigable Arctic, they also create some extensive regional challenges.

Increased human activity in the region is almost certain to add stress to an already-fragile environment. The effects of the 1989 Exxon Valdez oil spill off the coast of Alaska highlight the Arctic's particular vulnerabilities. A 2001 study by the National Oceanic and Atmospheric Administration showed that after 12 years, approximately 20 acres of shoreline were still contaminated with oil. Moreover, even contaminants originating outside of the Arctic are making their way to the North, showing tremendous persistence, and significantly affecting the indigenous populations. Sheila Watt-Cloutier, the 2005 Chair of the Inuit Circumpolar Conference, described the problem,

Used in industry and agriculture and released to the environment in tropical and temperate lands, some [persistent organic pollutants] were reaching the Arctic sink on air currents. Bioaccumulating and biomagnifying in the food web, particularly the marine food web, Inuit were ingesting POPs by eating seals, whales and walrus. POPs were passed to the unborn through the placenta, and to infants through breast milk.¹⁹

The environmental impact of a global rush north is not the only major challenge the world will face.

Numerous technological challenges are associated with operating in the Arctic. The U.S. Navy conducted a symposium and identified 23 major deficiencies in its ability to conduct operations in the Arctic region.²⁰ Among the most notable deficiencies were the lack of current charts, an inadequate navigation and communication infrastructure, and the ability to operate in austere weather environments.²¹ Moreover, the massive seasonal changes to the Arctic's landscape makes building a support infrastructure difficult. It is speculated that the current oil

pipeline infrastructure may become too expensive to operate with the pending permafrost destabilization.²² Additionally, already there are some indications that the current ice road infrastructure is becoming less dependable due to the longer melt seasons and higher temperatures.²³ Another major operational shipping challenge is avoiding unpredictable ice movements as the polar cap breaks up.²⁴ All these technological and operational difficulties will only exacerbate the problems with managing a northern migration.

Given the dramatic and persistent environmental impact of failure, effective regional management is critical to overcoming these challenges. As human activity in the region increases, there will be much greater demand for search and rescue capabilities. Moreover, shipping lanes will need to be developed. Weather reporting will need to be enhanced. A system for tracking and reporting ice movements will be needed to prevent accidents. Lastly, in the event of a spill, cleanup capabilities must be able to respond quickly and decisively. These are just some of the potential issues needed to be addressed. More importantly, they highlight the overall need for effective regional governance. While nations are beginning to address many of these difficult issues, the largest one remains unsolved.

Geopolitical Status in the Arctic

The global rush north is starting despite a weak legal framework. The 1982 U.N. Convention on the Law of the Sea (UNCLOS), last amended on 28 July 1994, is the only recognized legal authority covering Arctic development. Recognized by all eight Arctic nations (United States, Canada, Russia, Sweden, Finland, Norway, Iceland and Denmark), UNCLOS clearly defines territorial waters, exclusive economic zones, international straits, etc.²⁵ The International Seabed Authority (ISA), created by the UNCLOS treaty, is the internationally recognized authority to resolve UNCLOS disputes.

Although the United States has signed the UNCLOS treaty, a minority of congressional opponents have blocked its ratification.²⁶ They argue the treaty "risks compromising U.S. sovereignty by making international disputes subject to third-party arbitration."²⁷ Even though it treats UNCLOS as customary law, without ratifying the treaty, the United States has no legal mechanism to submit claims to the ISA.

There are weaknesses to the treaty. UNCLOS was created in an environment where the Arctic Ocean was considered ice-locked. Consequently, UNCLOS does not adequately cover many of the current regional disputes. Like the Spratly Islands in the South China Sea, many of the islands in the Arctic are claimed by multiple states. In addition, numerous long-standing disputes on interior waters versus international straits are not adequately addressed within the treaty. Specifically, the disputes listed below are some of the major conflicts in the region:

Northwest Passage (Canada/United States/European Union) - As depicted in figure 2, the Northwest Passage is the series of shipping lanes that cut through the Canadian Archipelagos. Canada claims because the waters are contained within its archipelago, they are internal waters.²⁸

UNCLOS allows an archipelagic state to define its territorial waters by drawing baselines around its archipelago's outermost points.²⁹ If the Canadian claim is upheld, all shipping that goes through the region would proceed under "innocent passage" and be subject to Canadian, rather than international, law. Moreover, all vessels transiting through the area could be required to pay Canada fees for "specific services rendered to the ship."

However, UNCLOS also defines an international strait as a body of water that connects one part of the high seas to another part of the high seas.³¹ The Northwest Passage links the Pacific and Atlantic Oceans. Consequently, the United States and European Union's position is that the waters should be considered an international strait.³² If this view is upheld, all shipping

could go through these waters under the status of "transit passage," which allows the ships to operate under international law.³³

While the United States may not be specifically concerned with the regional impact of ceding to Canada's claims to the Northwest Passage, it is concerned that this would set a precedent for other nations to make similar claims.³⁴ This could create a significant reduction in freedom of navigation across the globe. The Canadian government and its people, however, are extraordinarily emotional about this issue. As a former exchange officer in the Canadian Forces, I have witnessed many ordinary citizens express sincere disdain at the United States' position toward the Northwest Passage. Moreover, the Prime Minister's top priority on his official website is to ensure Arctic sovereignty.³⁵

Northern Sea Route (Russia/United States) – Russia claims that three of the major straits (Dmitry, Laptev and Sannikov) are historically internal waters.³⁶ The United States disputes that they are historic waters. Moreover, it argues that there is no basis in international law to apply historic waters to international straits.³⁷

Hans Island (Canada/Denmark) – The ownership is disputed between Canada and Denmark and may contain significant oil deposits.³⁸

Beaufort Sea (Canada/United States) – A 100-square-mile border dispute between Canada and the U.S. that may contain large deposits of oil and natural gas.³⁹

Bering Straits (**Russia/United States**) – A historic maritime boundary dispute was resolved in 1990 under the United States-Soviet Maritime Boundary Agreement.⁴⁰ The Russian Parliament, however, has not ratified the treaty. There is considerable Russian political opposition toward ratifying the treaty because Russian leaders believe that the agreement conceded too much to the U.S.⁴¹

Spitsbergen (**Russia/Norway**) – This island in the Svalbard archipelago belongs to Norway via the internationally recognized Svalbard Treaty of 1920. Each signatory to the treaty has unrestricted rights to the island to conduct commercial operations and also has unrestricted mineral rights.⁴² However, Russia claims that Norway is trying to eliminate the Russian presence on the island.⁴³

Perhaps the greatest source of strife in the region is the location of each nation's Exclusive Economic Zone (EEZ). According to UNCLOS, each nation is entitled to have complete control over exploring, exploiting, conserving and managing the natural resources within their EEZ.⁴⁴ This region is defined as the 200 nautical miles off a nation's coast. However, a nation can extend its EEZ if it can prove that its continental shelf extends beyond the 200 miles.⁴⁵ Moreover, nations have until 10 years after they have ratified UNCLOS to submit their continental shelf extension claims to the Commission on the Limits of the Continental Shelf (CLCS). Unfortunately, very little is known about the sea floor within the Arctic. Experts postulate that 90% of the seafloor is still unknown and that it would take tens of billions of dollars to map it with any certainty.⁴⁶ All of these disputes have largely been ignored because the region was barely accessible.

In the absence of a strong legal framework, sovereignty is largely being defined by power and propinquity.⁴⁷ In July 2007, Canada's Prime Minister, Stephen Harper, supported this notion by stating, "Canada has a choice when it comes to defending our sovereignty over the Arctic. We either use it or lose it. And make no mistake, this Government intends to use it. Because Canada's Arctic is central to our identity as a northern nation." That same month, Russia, in attempting to make a symbolic claim to its desired Arctic territory, planted a titanium Russian flag directly on the North Pole seabed. In response, Peter Mackay, the Canadian Minister for

Foreign Affairs, showed just how hot the strategic climate is getting when he remarked, "This isn't the 15th century. You can't go around the world and just plant flags." This environment is leading to a revision in global strategic posturing.

The world is at a precipice of a potential new cold war in the Arctic between Russia and the NATO Arctic nations. Russia is in a position to win it. The number of icebreaking hulls a country operates is the simplest and most tangible measure that can be used to judge its ability to conduct northern operations. The United States has a total of four diesel-powered icebreakers (one of which is out of service for this year) whereas the Russians have 14.⁵¹ Of the 14, seven are nuclear-powered--capable of cutting through nine feet of ice without even slowing down. In comparison, the U.S. icebreakers can only make it through six feet of ice at a constant speed.⁵² Even China and South Korea, non-Arctic nations, have icebreakers in preparation for regional access.⁵³

In addition to greater Arctic naval power, the Russians also have a superior support infrastructure. The Soviet Union, in sustaining the Northern Sea Route and oil development in the Barents Sea, invested tremendous capital in developing a robust infrastructure of rail lines and river transport services. It maintained this infrastructure by offering state workers huge subsidies and inflated wages. Following the collapse of the Soviet Union, and the loss of state jobs, the region experienced a significant reduction in population. However, the Russian North still has a fully functioning infrastructure in place.⁵⁴ Meanwhile, the North American presence is "naked and unguarded."

Russia intends to use these weaknesses along with divisions among the NATO members to increase its power in the region. According to a leading Russian economic journal, "...Russia's main task is to prevent the opposition forming a united front. Russia must take

advantage of the differences that exist [between NATO states]."⁵⁶ Moreover, a prominent Russian Navy journal acknowledged that an increase in regional militarization could increase the possibility for local military conflict. "Even if the likelihood of a major war is now small, the possibility of a series of local maritime conflicts aimed at gaining access to and control over Russian maritime resources, primarily hydrocarbons, is entirely likely."⁵⁷

Consequently, NATO is beginning to prioritize the Arctic as a new security front. At a recent NATO conference discussing security issues in the Arctic region, the Secretary General concluded his address by stressing the importance of NATO members remaining united. He argued, "The indivisibility of the security of Allies has always been a core principle of NATO. And it's a principle we ignore at our peril."⁵⁸

Conflict in the region, however, is not inevitable. Among the NATO allies, especially, there have been plenty of diplomatic successes to resolve differences. All the parties within the region have shown a willingness to work within the constraints of international law. Even Russia, despite its flag-planting antics, has accepted those constraints. In discussing Russia's position on Arctic policy, its Ministry of Foreign Affairs released the following press statement, "Russia strictly abides by the principles and norms of international law and firmly intends to act within the framework of existing international treaties and mechanisms. As was pointed out in the joint declaration of the ministerial meeting of the five Arctic coastal states held in Ilulissat, Greenland, this past May, these states, including Russia, are committed to the existing international legal framework that applies to the Arctic Ocean and to the orderly settlement of any possible overlapping claims." It is only in the Arctic areas where international law has failed that conflicts are escalating. Consequently, the United States must seek a way to bolster

international law in order to provide stability in the region. To this end, U.S. Arctic policy must be guided by the following six steps.

Six Steps to an Effective U.S. Arctic Policy

Step 1: Ratify UNCLOS

The United States must ratify UNCLOS as soon as possible. It is the entrance fee to sit at the table and discuss international law in the Arctic. With 156 other nations belonging to UNCLOS, the absence of the United States signals to the world that it intends to be a unilateral actor. Moreover, it also decreases the strength of international law in the region. Given that international law is the only constraint to massive power projection and militarization in the region, continuing to be a signatory without ratification is detrimental to regional security. In addition, there is considerable evidence showing that the continental shelf off the Alaskan coastline extends well beyond the 200 nautical mile EEZ limit. It is estimated that United States could claim an extra 291,000 square miles. This extra seabed could yield approximately 27 billion barrels of oil. As a party to UNCLOS, the United States would be able to formally submit its claim to the CLCS and have this continental shelf extension to the EEZ internationally recognized.

Opponents to ratification argue that ratifying the treaty undermines U.S. sovereignty.⁶⁴ In essence, in the event of a dispute, the ISA would have the ability to rule against the interests of the United States. Not only is this position outdated, it is incorrect. It assumes that the United States has the naval power to assure its interests at sea. However, U.S. naval power in the Arctic is limited, at best. Moreover, the continental shelf extensions in the Arctic are a perfect example of how ratifying the treaty would actually enhance U.S. sovereignty, rather than limit it. Additionally, ratifying a multilateral treaty would signal to the world that the United States will

operate on the same set of rules agreed to by everyone. At a minimum, ratification would buy some badly needed international goodwill.

Despite opposition by a few members of Congress, UNCLOS ratification has widespread support in the military, diplomatic and intelligence communities. The Departments of Defense, State and National Intelligence have consistently advocated that the Senate should ratify the treaty. In fact, all of the members of the Joint Chiefs of Staff have written the Senate letters seeking the Senate's advice and consent. Moreover, in his last NSPD before leaving office, President George W. Bush explicitly sought UNCLOS's ratification. At the end of 2007, the Senate Committee on Foreign Relations voted to recommend ratification. The U.S. Senate's vote is pending.

Step 2: Empower the Arctic Council

The Arctic Council was formally established by the Ottawa Declaration of 1996. It was created to act as "a high-level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction...on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic." Membership in the Council includes the eight Arctic nations and several non-governmental organizations that represent the region's indigenous populations. The chairmanship rotates among the member states every two years. As a non-binding organization, it has had significant success in highlighting regional environmental concerns and conducting scientific research. One of its major successes includes the Arctic Climate Impact Assessment. This report is, arguably, the most authoritative research report on the impact of Arctic climate change. However, the organization is too narrowly focused.

The United States should attempt to broaden the organization's scope beyond environmental analysis and scientific research. The Arctic Council should act as a forum that discusses *all* issues in the Arctic, rather than purely environmental ones. True multilateral solutions to regional problems cannot take place by relying on press statements and bilateral negotiations. They must be developed multilaterally. To date, no forum like that exists. While the United Nations may be effective at handling global issues, it has too many extraneous actors to effectively handle Arctic issues. Moreover, it does not provide for representation by the indigenous populations.

The importance of indigenous population input to regional development cannot be overstated. Clearly, there are similarities between this global rush north and the North American push west in the 19th century. Morally, the world must not repeat many of the events that led to the marginalization of native North American populations. Besides the moral repercussions, there also could be serious security concerns. Approximately four million people from 30 different populations are spread throughout the region. Development against the wishes of the indigenous populations could create regional unrest. Finally, the indigenous populations have considerable expertise in the area and could provide significant contributions to regional development. Fortunately, the Arctic Council provides a mechanism for the indigenous populations to provide input.

The Arctic Council also should be empowered to establish binding environmental standards. The impact of environmental failures (spills, dumping, etc.) will be felt by each nation and their indigenous populations. These failures pose two significant problems: first, there is an intrinsic loss of the natural resources in the region; and secondly, they could cause a significant reduction in regional security. For example, after the collapse of the Soviet Union,

Russia released a report describing more than three decades of dumping radioactive waste in the Arctic Ocean.⁷¹ Additionally, as of September 2004, about 60% of Russia's decommissioned submarines still had nuclear fuel on board.⁷² The effects of these failures are still being determined. If, after investing billions of dollars in regional development, it is no longer safe to operate in the Arctic because the radioactivity in the region is too hazardous, there would be significant hostility toward Russia for creating this situation, causing other regional actors to lose significant investments.

Besides pushing for an empowered Arctic Council through diplomatic channels, the United States should propose a joint scientific exploration of the Arctic seafloor composed of representatives from each of the Arctic nations. Still within the purview of the current Arctic Council mandate, this coalition would enable the Arctic nations to jointly determine the lengths of each continental shelf, without creating an environment of distrust. Currently, there are unilateral and bilateral scientific explorations to counter opposing claims. Russia, for example, has attempted to claim more than half of the Arctic seabed (the size of western Europe) by arguing that the Lomonosov Ridge is attached to the Siberian continental shelf.⁷³ Meanwhile, both Canada and Denmark believe the Lomonosov Ridge is attached to the North American continental shelf and are going on a joint expedition to counter the Russian claim.⁷⁴ Given an empowered Arctic Council, a joint scientific exploration could be conducted to study each of the continental shelves. Following the exploration, the empowered Arctic Council would act as a forum to discuss the scientific claims and, hopefully, submit a unified claim to the CLCS. While there are obstacles such as funding and time limits to submit claims to the CLCS, the overall concept needs to be explored.

Step 3: Submit Maritime Claims to the International Seabed Authority ASAP

As previously mentioned, UNCLOS does not adequately cover many disputes in the region. Maritime boundaries and ownership of islands still need to be resolved diplomatically (hopefully, through an empowered Arctic Council). However, many disputes could be resolved by the ISA. For example, there are good arguments on both sides for the Northwest Passage to be considered Canadian internal waters or an international strait. They are so good, in fact, that both sides fear losing their claim.⁷⁵

If too much hostility is brewing in bilateral negotiations, the United States should submit claims to the ISA and let the chips fall where they may. At a minimum, U.S. senior leaders should balance potential benefits of winning each of the disputes against the potential for regional insecurity in the Arctic. Moreover, the United States should realize that sovereignty claims change as presence in the region increases. Since the United States is behind in Arctic development, it is in its best interest to see speedy resolutions to these regional disputes.

Step 4: Engage the U.S. Public

In order for the U.S. government to have the diplomatic clout to advance U.S. interests and the economic resources for Arctic development, the American public must internalize that they belong to an "Arctic Nation." Without widespread public support for Arctic interests, the international community will see U.S. diplomatic initiatives as disingenuous and illegitimate.

The other major actors have recognized this and already have mobilized their citizenry. The Canadian Prime Minister's number one priority on his website is "Arctic Sovereignty." He has toured the Canadian Arctic monthly since he became Prime Minister, pushed for Arctic-capable ships that can ensure Canadian sovereignty and called for the construction of a deep water port in the Arctic. Arguably, Russia has conducted the greatest publicity stunt in the region by planting a flag on the North Pole. After returning from the North Pole, the

expeditionary leader described the purpose of the trip, commenting, "The Arctic always was Russian, and it will remain Russian." ⁷⁹

The United States, on the other hand, has largely been quiet about the region. The first national Arctic policy in 15 years, NSPD-66, was released in January 2009 as President Bush's last executive order. While it may have been important to Alaskans, Senator Lisa Murkowski (R-AK) remarked that the lower 48 states didn't pay much attention to it. There are few signs that current senior leaders are prioritizing the region. Despite the region's importance, advancing U.S. Arctic issues didn't make the list of President Barack Obama's 24 priorities. Convincing the populations of Florida and Hawaii that they belong to an "Arctic Nation" would be an uphill battle. It can, however, be done. U.S. senior leaders can hold news conferences, make statements and take trips to Alaska. Moreover, they can emphasize the possibilities of energy independence and publicly discuss current vulnerabilities in enforcing U.S. Arctic sovereignty. By focusing on the changes in the Arctic region, the U.S. also could get the extended benefit of having a more environmentally conscious population. This, conceivably, could reduce total energy consumption and dependence on foreign energy resources.

Step 5: Reorganize the DOD Unified Command Plan (UCP)

Despite the Arctic's unique regional challenges, the Department of Defense currently divides the military's responsibility in the area among three different Geographic Combatant Commands (GCCs). As depicted in figure 3 of the Appendix, the Arctic is divided between U.S. European Command (USEUCOM), U.S. Northern Command (USNORTHCOM), and U.S. Pacific Command (USPACOM).

Each of these three GCCs contributes specific expertise to the region. For example, USEUCOM has in-depth knowledge of Russian/NATO relations. USNORTHCOM has

expertise in the enforcement of U.S. sovereignty and Canadian/U.S. relations. USPACOM understands the impact of the Northern Sea Route on Asian interests. However, the region does not have a single military commander to handle all the of the Arctic's unique challenges.

The Department of Defense needs to reorganize the Unified Command Plan to provide for effective coordination of U.S. military operations in the region. According to Joint Publication 1-0, "GCCs provide guidance and direction through strategic estimates, command strategies, and plans and orders for the employment of military force." Without a single commander in the region, it is unlikely that the unique Arctic challenges will be effectively addressed. Given its focus on expanding NATO and installing theater missile defense in Eastern Europe, it is doubtful that USEUCOM will request an icebreaking capability to ensure United States' freedom of navigation in the Arctic; even if it did, it is not likely that the icebreaking capability will be appropriately prioritized among other theater requirements.

There are two approaches to reorganizing the Unified Command Plan that should be considered by the DOD. The first option is to expand one of the GCCs to cover the entire Arctic region. The most logical choice would be USNORTHCOM because of its focus on ensuring U.S. sovereignty. The second option could be to establish a new Arctic GCC. Either of these two options will ensure regional unity of command.

Step 6: Develop a Robust Arctic Capability

At a minimum, the United States needs to ensure its Arctic sovereignty. Given a weak icebreaking capability and a deficient infrastructure, we currently do not have the ability to operate north of Alaska as we do south of it.⁸³ The United States must be able to protect its interests in the region. To this end, the U.S. government should follow the recommendations of the Arctic Conference Report generated in 2008 by National Defense University.⁸⁴ These

include investment in a fleet of icebreakers, ice pilotage training programs, polar orbiting satellites, weather/ice forecasting, comprehensive Arctic hydrographic data and navigation aids. Moreover, the United States needs to build ports on the northern shores of Alaska, since it currently has none. Lastly, the technological and operational deficiencies highlighted by the U.S. Navy's *Naval Operations in an Ice-free Arctic Final Report* must be addressed. By developing a basic infrastructure and operational capabilities, the U.S. government will pave the way for sustainable economic development in the Arctic.

Conclusion

The Arctic is melting at a rapid pace. With vast natural resources, regional tourist interest and improved commercial shipping prospects, human activity in the Arctic is expected to surge. The region's unique environment poses significant operational and technological challenges to development. Its fragility also makes the environmental impacts of failure costly. Effective regional governance is essential to sustainable development. Unfortunately, the legal framework in the Arctic is insufficient to handle current sovereignty and resource rights disputes. Regional governance is at a crossroads between cooperation and competition among the Arctic nations. Woefully behind the other Arctic nations in both capabilities and development, the United States must pursue an active Arctic policy. In order to promote cooperation in the region, it should lead multilateral efforts to resolve disputes, develop enforceable environmental standards, and enhance scientific exploration. It can accomplish this by following a six-step process. The U.S. must ratify UNCLOS, empower the Arctic Council, submit claims to the ISA, engage the U.S. public, reorganize the UCP, and develop an Arctic capability.

Appendix

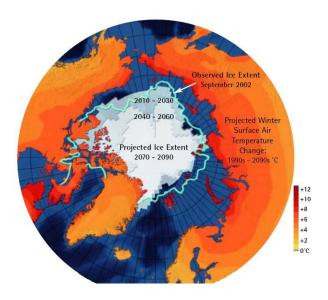


Figure 1. Projected sea-ice cover over the next century⁸⁸



Figure 2. Location of the Northwest Passage and Northern Sea Route⁸⁹



Figure 3. Current Unified Command Plan divisions in the $\operatorname{Arctic}^{90}$

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